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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,650	10/07/2003	Dwight J. Pakan	IN-5621	5087

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EXAMINER

POULOS, SANDRA K

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,650

Applicant(s)

PAKAN ET AL.

Examiner

Sandra K. Poulos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/07/03;2/24/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

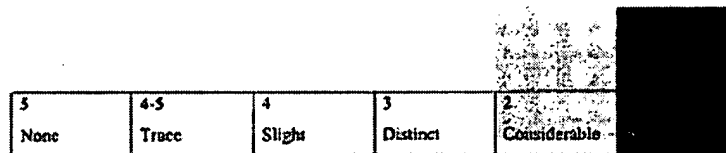
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is less than 50 words. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities:
- In paragraph 10 there should be a comma between a sulfur dye and a vat dye.
 - Paragraph 33 is punctuated with 2 periods at the end of the sentence ("surface coverage.."). Please remove one of the periods.
 - Paragraphs 41 and 44 display the following Bleed Fastness Grey Scale Evaluation:



5 None	4-5 Trace	4 Slight	3 Distinct	2 Considerable
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The scale is unreadable for the rightmost box and there is no visible difference between None (5), Trace (4-5), Slight (4), and Distinct (3).

- It is unclear what "(WHAT WAS THE APPLICATION RATE?)" from paragraph 46 means.
- The exact meaning of paragraph 12 is unclear. See explanation in paragraph 3 of this Office action.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, claim 2 recites "the coloring composition further comprises at least one of a filler, a viscosity modifier, a dispersant, a lubricant, and a pH adjusting agent," wherein it is unclear whether this means:

- (i) The composition comprises at least one of a filler, and additionally a viscosity modifier, a dispersant, a lubricant, and a pH adjusting agent
- (ii) The composition comprises at least one filler, at least one viscosity modifier, at least one dispersant, at least one lubricant, and a at least one pH adjusting agent
- (iii) The composition comprises at least one of: a filler, a viscosity modifier, a dispersant, a lubricant, or a pH adjusting agent

Hence, claims 9-14 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

It is to be noted that for the purposes of examination, the Examiner has assumed the interpretation given in (iii).

Additionally, claim 17 is indefinite because when the filler, viscosity modifier, dispersant, and lubricant are at 0%, it will be in conflict with claim 2

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which recites that at least one must be present. Also, it is unclear whether all of (a)-(f) need to be met or only one. The "and" at the end of the (e) clause is ambiguous. Examiner is interpreting "and" as if it were "or" in claim 17, and additionally claims 15, 16, and 18.

Furthermore, claim 18 is indefinite because it is unclear what 4 (slight) as measured by the BASF Bleed Fastness Test means because the specification gives no differentiation between 4 (slight) and 5 (none) or 3 (distinct), (see paragraph 3, part (c) above).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-9, 12, 14, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Troesch et al (GB 2,117,783 A).

Troesch '783 discloses a paper coating composition comprising a filler, binding agent, and dye able to bind to the paper fibers to avoid bleeding of color (pg 1). Disclosed fillers are listed in page 1, lines 31-43. Dyes with acid groups and metallized or metal free dyes are disclosed (pg 1, lines 44-56). It is desirable to add 0.1-10% of a dispersing agent, particularly a naphthalene sulfonate (pg 2,

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lines 29-42). Binders disclosed are starch and dispersions of styrene and butadiene, etc. and are listed on page 2, lines 43-46.

The coated paper of the invention has good light fastness and excellent bleeding fastness (pg 2, line 50-61; pg 3, example 1). Absent evidence to the contrary, it is examiner's position that "excellent bleeding fastness" is equivalent to a bleed of no more than about 4 (slight) as measured by BASF Bleed Fastness Test and that "good light fastness" is equivalent to a light fastness of at least about 80 hours as measured by BASF Lightfastness Test.

Furthermore, it is examiner's position that because the colored composition is coated on the paper rather than prepared by a method of coloring the pulp and then forming the paper, it would be inherent that 30-70% less coloring agent would be used to achieve the same color shade.

Example 1 on page 3 discloses a composition applied to paper that contains kaolin, a deep turquoise blue dye, a dispersing agent, a butadiene/styrene binder, and ammonia, which is used as a pH adjusting agent.

In light of the above, Troesch '783 anticipates the cited present claims.

5. Claims 1, 5-7, and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Santini et al (US 5,389,717).

Santini '717 discloses a composition comprising a styrene-butadiene resin, a colorant, and a solvent (col 3, lines 1-3). Suitable colorants include pigments (col 3, line 4) and basic dyes (col 4, lines 48-53; col 6, line 58) that are not white. Example 1 shows the optimal range for styrene butadiene resin and

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pigments, 16-28% and 0.4-4%, respectively (col 6, lines 23-30). In Example 2, the composition was applied to various paper substrates (col 6, lines 34-44).

Santini '717 does not disclose use of a cationic fixing agent.

In light of the above, Santini '717 anticipates the cited present claims.

6. Claims 1, 2, 5-8, 11, and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wirt et al (US 2,656,327).

Wirt '327 discloses a pigmented coating composition for the production of pigmented coatings on paper, which contain binders or resins such as starch (col 1, lines 1-6, 15-19). Wirt '327 discloses carbon black formulations and printing patterns, which indicate that the composition is non-white (col 1, lines 36-55; col 2, lines 1-14; col 6, lines 16-28). Wirt '327 discloses a typical formula for a pigmented pasta: 5.5% pigment, 15% polystyrene latex, 30% cationic urea formaldehyde, 1% thickener (sodium carboxymethylcellulose), 7% polyethylene glycol, and 41.5% water (col 5, lines 26-40).

Polyethylene glycol is not called a lubricant as such, but "from the standpoint of patent law, a compound and all its properties are inseparable," *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963). Moreover, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), and further "when the PTO shows a sound basis for believing that the products of

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the applicant and the prior art are the same, the applicant has the burden of showing that they are not," *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). In fact, "products of identical chemical composition can not have mutually exclusive properties," and a chemical composition and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

The thickener is necessary to obtain a suitable printing viscosity (col 2, lines 40-52). The composition includes sodium carbonate which acts as a pH adjusting agent (col 4, lines 70-74; col 5, lines 1-40). Wirt '327 also discloses a melamine-formaldehyde for use in the composition (col 4, lines 70-74; col 5, lines 1-15). Wirt '327 disclose resins such as polyvinyl chloride, polystyrene, and polyvinyl acetate being added to the composition (col 6, lines 37-59). Cationic fixing agents are not disclosed. It is examiner's position that because the colored composition is coated on the paper rather than prepared by a method of coloring the pulp and then forming the paper, it would be inherent that 30-70% less coloring agent would be used to achieve the same color shade.

Furthermore, when the composition is applied to cloth, the pigment prints show exceptionally good washability and crock resistance (col 6, lines 16-28). It is examiner's position that exceptionally good washability indicates that the composition would meet the bleed fastness test set forth by the presently cited claims.

In light of the above, Wirt '327 anticipates the cited present claims.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troesch '783 in view of Killat et al (US 4,402,748).

Troesch '783 discloses the composition given in paragraph 4 above.

Troesch '783 discloses that a conventional fixing agent may be optionally used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition to either include a fixing agent or to leave it out of the composition. However, Troesch '783 does not specifically disclose a "cationic" fixing agent.

Killat '748 discloses the use of cationic fixing agents in printing inks that contains a dye or pigment and often a binding agent (col 1, lines 8-35). Furthermore, the ink shows improved fastness after application (col 1, lines 32-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a cationic fixing agent as the fixing agent defined in Troesch '783, because of improved fastness of ink application. One would expect success from this combination because both Troesch '783 and Killat '748 disclose composition binders and dyes that are applied to paper. Furthermore, Troesch '783 broadly discloses "fixing agent" which would imply that any fixing agent, such as a cationic fixing agent, would be suitable especially in light of Killat '748. Therefore, the combined the teachings of Troesch '783 and Killat '748 disclose the invention as set forth in the presently cited claims.

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9. Claims 2, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santini '717.

Santini '717 discloses the composition in paragraph 5 above. Santini '717 discloses that associative thickeners may be added to the composition (col 3, lines 6-9; col 5, lines 64-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition to include an associative thickener and/or basic dye because Santini '717 discloses that such can be done. Furthermore, it would have been obvious to one skilled in the art to have kept within the optimal range given in Example 1 when adding optional ingredients such as an associative thickener.

Therefore, Santini '717 discloses the invention as set forth in the presently cited claims.

10. Claims 1-3, 5-9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd et al (US 4,837,087).

Floyd '087 discloses a paper coating composition comprising a pigment and a binder such as starch, styrene butadiene copolymer, or acrylic polymer to adhere the pigment to the paper (col 1, lines 11-16). Other binders are listed in col 2, lines 56-58; col 4, lines 18-35, 42-68. Melamine-formaldehyde resins are also disclosed (col 1, lines 26-55). The pigments may be clay with or without titanium dioxide and/or calcium carbonate (col 5, lines 1-4). The pigments disclosed by Floyd '087 correspond to the fillers in the present claims. The paper coating composition may include dispersants, lubricants, colored pigments,

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viscosity modifiers, as well as a latex (col 5, lines 4-14). In column 6, Examples III and IV, the pH is adjusted with caustic soda (sodium hydroxide) and acetic acid, respectively. In column 7, Example VIII, a dispersant is added to the composition. Floyd '087 does not disclose the use of a cationic fixing agent.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition to include the optional ingredients disclosed by Floyd '087, such as colored pigment as the coloring agents, lubricants, and viscosity modifiers, in addition to the binder, titanium dioxide/calcium carbonate, dispersants, and pH modifiers.

It is examiner's position that when a colored composition made from the disclosed invention was coated on the paper rather than prepared by a method of coloring the pulp and then forming the paper, it would be inherent that 30-70% less coloring agent would be used to achieve the same color shade.

Therefore, Floyd '087 discloses the invention as set forth in the presently cited claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Catlin et al (US 5,883,233): Discloses a yellow dye for coating paper, with optional binder, lubricant, viscosity modifier, and filler.

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Morita et al (US 4,943,612): Discloses film coating compositions for coated paper. Includes binder, fillers, coloring agents, optional dispersants and viscosity modifiers.

Wallstrom et al (US 5,534,049): Discloses a printing ink with binder, dye that exhibits no bleeding, viscosity modifiers, optional dispersing agents, and adjustment of pH values or the ink.

Ritson et al (US 2,620,316): Discloses pigmented coating composition for coating paper, including dispersants.

Porter et al (US 3,985,932): Provides motivation for using lubricants in paper coatings made from pigments.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 7:30-5:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

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11/14/2005

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